

Welcome to *The Great Logo Adventure!*

Logo is a great adventure for anyone from 2 to 102. The really fun part of it is that YOU are in charge. YOU control the action. YOU make all the decisions. And, yes, you make all the mistakes. But who cares? That's part of the fun, too.

To get you started, we asked our friends, Logy and Morf, to put together this new version of their Discovery Book. Logy is the Turtle who has been our mascot for more than ten years now. Morf is her long-time friend.

a nice guy



Sometimes he isn't too smart. But he's anyway.

Use this whatever you what you can do Mathland, Recursion, List Processing, Simulations, Fun and Games, and lots more...where you'll discover many more parts of The Great Logo Adventure.

book as your guide, whatever your age, want to do with Logo. You'll discover with turtle graphics. Then move on to

Some Logo History

Logo got its start in the 1960's at Bolt, Beranek, and Newman, Inc., a company in Cambridge, Massachusetts, who worked with people from the Massachusetts Institute of Technology.

A couple of years later, they added a small, round robot that was connected by wires to the computer. It looked sort of like a turtle. Using a small keyboard, young people gave the turtle commands to make it go forward, back, left, and right, moving over a big piece of paper, drawing pictures as it moved along.

This was fine for awhile. But when personal computers became popular in the late 1970's, the National Science Foundation and Texas Instruments Incorporated both asked the MIT people to make Logo work on small computers.

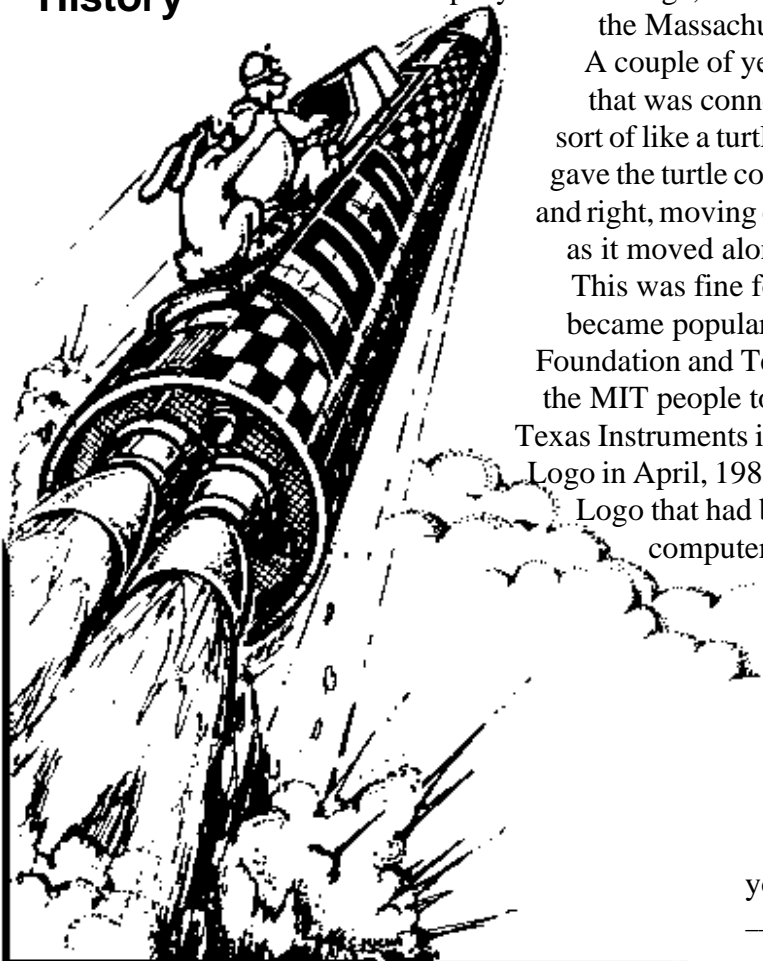
Texas Instruments introduced the first commercial version of Logo in April, 1981. In January of 1982, the MIT version of

Logo that had been developed for the Apple II family of computers was introduced. Since then, there have

been many more versions of Logo for just about all personal computers.

Now you have MSW Logo...free Logo software ready for Windows 3.1, Windows 95, and Windows NT.

But before we go too far, why not show your parents or your teacher the next page.



To Parents...teachers, too !

I've got what may be a surprise for you. This is *Not* a book about programming.

It's a family activity book about the fun you can have exploring the scope of your imagination. *The Turtle's Discovery Book* relishes the value of play...the value of games and game design...the fun of discovery...even the fun of mathematics and language arts.

The first chapters of the *The Turtle's Discovery Book* present an introduction to Logo written for elementary school ages. Here the focus is on our friends, Logy and Morf, as they explore the computer and discover learning with Logo on and off the computer.

The later chapters are for those who want more from The Great Logo Adventure...whatever their age. It digs into such things as recursion, two- and three-dimensional geometry, list processing, simulations, fun and games, and such.

What is Logo

Logo is best described as an educational philosophy expressed through an evolving series of computer languages. MSW Logo for Windows is among the latest "expressions." Developed by George Mills, it is based on UCB Logo developed by Brian Harvey, a long-time Logo advocate and developer.

Logo is an interactive language for learners of all ages. It has borrowed the techniques of symbolic computation...the manipulating of words and ideas...from the LISP programming language. These techniques are combined with other powerful ideas such as the use of procedures, recursion, and the manipulation of programs as data to provide a unique interactive learning environment.

Don't get me wrong! This is not a book about "computer literacy," whatever the current and politically correct definition is supposed to be. And most certainly, it is not written in computerese.

It's about *self-literacy*. It is a book about young people of all ages using the computer and Logo as tools for self-discovery.

Young people from 2 to 102 begin by controlling the actions of a cybernetic turtle. These actions let them "see" how they are thinking. When the sequence of thoughts do not make the turtle do what they want, the descriptive nature of Logo allows them to easily retrace their thoughts, or to pursue a new direction.

Multi-dimensional and multi-sensory activities done on and off the computer help young people develop a better insight into how to make things happen in the real world -- the world of three dimensions. Along the way, they get introduced to some powerful ideas, about organizing, analyzing, and manipulating ideas.

Planting Some Seeds

Like the gardener, we plant some seeds on these pages. You are the one to feed these ideas, to nurture them, and to make them grow. Be patient! You may be tempted to rush over the details.

Remember... the younger the learner, the more dependent (s)he is on imitation and repetition for learning.

So join your young people at the computer. Cultivate their imaginations. Give them the time to explore. And don't be surprised if you are the one who ends up being cultivated.

“Why not just let a child explore on her/his own?”

There are those who advocate each child using their own computer. But allow me to offer an old Bambara proverb for consideration...from the drought-ridden country of Mali in West Africa.

“Mogho Kelen Te Sira Be!”



Loosely translated, this says that “one person cannot make a trail.” To accomplish a common task, the multiple talents of a group working together can be more productive than the finite talents of the individual. This is why the focus of this book is on families and family activities.

OK...Ready to start?

Good...it's time to enjoy your very own Great Logo Adventure!

About the Author

Jim Muller has had a lifelong interest in translating high technology into understandable, practical, and enjoyable applications...especially for young people. He began working with Logo in 1979 while public relations manager for Texas Instruments Incorporated. They introduced the first commercial Logo package in April, 1981.

Also in 1981, Muller and his son organized the first Logo users group. What started as eight junior high students enjoying TI Logo around a ping-pong table in the Muller garage, grew into the Young Peoples' Logo Association, Inc. (YPLA). Organized by and for all the young peoples of the world, the association quickly grew to 6000 members in 42 countries. In 1985, the YPLA joined CompuServe as the Logo Forum, where it remains active today.

In addition to a monthly newspaper, the YPLA published these books...

- *1,2,3 My Computer and Me*
- *The Turtle's Sourcebook*
- *The Turtle's Discovery Book*
- *The Misadventures of Mrtle*
- *The Logo Library*
- *Learning Logo On and Off the Computer*

and this interactive software...

- *Logo Island Adventures*
- *Voyages of The Turtle Shell*
- *Escape From Logo Castle*

Today, the Logo Forum offers product support from major Logo developers, 16 libraries of public domain and freeware Logo software, Logo utilities, projects, demos, and tutorials...and discussions among some 3,000 or so Logo fan(atic)s from around the world.

Acknowledgments

There are far too many! There's my son, Larry, and his friends. Without their curiosity and enthusiasm, the Young Peoples' Logo Association never would have happened.

There are far too many young people from around the world who shared their own Great Logo Adventures with us. A few of those adventures are in this book.

Without George Mills and his development of MSW Logo, Logy and Morf would still be mulling around in their cybernetic microworlds.

There's Jack Kishpaugh, an inspirational quadriplegic with a totally infectious personality to whom all YPLA books are dedicated. He taught us the meaning and value of never saying "Never."

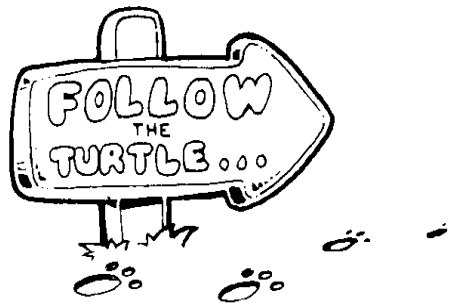
There's the late Charles Micha, the cartoonist who made The Great Logo Adventure come to life through his characters.

And, of course, there's Audrey Muller who has survived the invasion of Turtle androids and still managed to maintain a sense of stability all these years. A favorite quotation states that...

"He who has imagination without learning has wings but no feet."

Audrey has been like the teacher...providing the stability where we can plant our feet so that our minds can soar with the eagles.

Lastly, but certainly not the least important, special thanks to the many educators who helped develop and validate the YPLA approach to Logo. More recently, there's Jenny Betts of Brisbane, Australia, and Toby Epstein of the LaDue School District in St. Louis, Missouri. Through our cybernetic conversations on CompuServe, I've again discovered how much fun learning can be, on and off the computer.



Jim Muller



The Logo We Speak

The Turtle's Discovery Book uses MSW Logo, a free version of the language developed by George Mills. MSW Logo is a Windows version of UCB Logo that was developed by Brian Harvey at the University of California at Berkeley.

While MSW Logo is copyrighted software, it may be copied and distributed. However, it cannot be sold. The Logo procedures that are on the diskette that comes with this book are all public domain. They were contributed to The Logo Forum on CompuServe by the author or by young people around the world. Feel free to copy them, change them, and give copies to whoever you want.

What about other versions of Logo? Can I use them with this book?

Yes...but there are some differences. Keep your Logo manuals handy to help figure out the changes required.

Got a question?

Contact the author on CompuServe at 76703,3005 or via E-mail at 76703.3005@compuserve.com.
